

What Is Claimed Is:

**1. A multifunction system comprising:**

an image output unit that has an optical signal input unit capable of receiving an optical signal, and outputs an image according to an optical signal inputted from the image signal input unit;

a first functional unit that has a first optical signal output unit capable of outputting an optical signal and outputs the optical signal according to a first function through the first optical signal output unit;

a second functional unit that has a second optical signal output unit capable of outputting an optical signal and an optical signal input unit capable of receiving an optical signal, and outputs an optical signal according to a second function through the second optical signal output unit, and receives an optical signal inputted through the second optical signal input unit; and

a distribution-type optical signal transmission medium to which the image signal input unit, the first optical signal output unit, the second optical signal output unit, and the optical signal input unit are connected, and which distributes an optical signal outputted from at least the first optical signal output unit to the image signal input unit and the optical signal input unit, and transmits an optical signal outputted from the second optical signal output unit to the image signal input unit.

**2. The multifunction system according to claim 1, wherein the first optical signal output unit and the second optical signal output unit include a unit that generates plural optical signals of different types, and the image signal input unit and the optical signal input unit include an extraction part that extracts an optical signal of a specific type from inputted optical**

signals.

3. The multifunction system according to claim 2, wherein the plural optical signals of different types are optical signals with different intensity levels.

4. The multifunction system according to claim 2, wherein the plural optical signals of different types are optical signals with different wavelengths.

5. The multifunction system according to claim 2, wherein the plural optical signals of different types are optical signals with different timings of output to the distribution-type optical signal transmission medium.

6. The multifunction system according to claim 2, further comprising:

an arbitrating part that arbitrates the respective communications of the image output unit, the first functional unit, and the second functional unit by specifying the types of optical signals to be outputted by the first optical signal output unit and the second optical signal output unit, and the types of optical signals to be extracted by the image signal input unit and the optical signal input unit.

7. The multifunction system according to claim 1, wherein the distribution-type optical transmission medium comprises a diffusion part that diffuses an inputted optical signal.

8. The multifunction system according to claim 1, wherein the image output unit comprises a printer, the first functional unit comprises an image reading device, and the second functional unit comprises at least a storage part that stores a signal inputted from the optical signal input unit, wherein the first functional unit outputs an optical signal in

accordance with an image to be printed; the second functional unit stores in the storage part a signal according to the optical signal inputted through the optical signal input unit, and outputs the optical signal in accordance with the image through the second optical signal output unit; and the image output unit prints the image according to the optical signal inputted from the second functional unit through the image signal input unit.

9. The multifunction system according to claim 1, further comprising:

a third functional unit having a third optical signal output unit, the third optical signal output unit outputting an optical signal according to a third function to the distribution-type optical signal transmission medium,

wherein the first functional unit outputs an optical signal to the image output unit through the first optical signal output unit, and the third functional unit transmits an optical signal to the second functional unit through the third optical signal output unit.